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ABSTRACT

This history of the development of the Comprehensive Career Education (School Based) Model (CCEM), includes historical antecedents of the project, early organizational activities, major conceptual focuses, and current efforts. In June 1971 the Center for Vocational and Technical Education (CVTE) at The Ohio State University in Columbus, Ohio was awarded a $2 million grant by the U.S. Office of Education (USOE) for the developmental phase of this career development program, which utilizes a comprehensive systems approach for Kindergarten through post-secondary education. Supplemented by a $1.7 million grant in October 1971, the USOE selected six Local Education Agencies from 53 candidates, providing each with a CVTE resident project team to offer technical assistance, on-site consultation and a direct liaison with CVTE, which is accountable to the USOE for the entire program and funds expended. The CCEM project identified: (1) eight conceptual elements, (2) eight student learning objectives, and (3) a matrix, or developmental model, with 32 themes and 1,477 sequential goals extending across all grade levels. Operational and evaluation procedures for CCEM are delineated, and program developments are specified. (AG)

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The Comprehensive Career Education Model

PROGRESS REPORT

JULY 1972

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THE COMPREHENSIVE CAREER EDUCATION MODEL

PROGRESS REPORT

(Covering the period from
June 1971 through May 1972)

Submitted by
The Center for Vocational and Technical Education
at The Ohio State University
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July 20, 1972

Prepared for the
U. S. Office of Education
Career Education Development Task Force

U. S. DEPARTMENT
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TABLE OF CONTENTS

FOREWORD...

This report traces the development of the Comprehensive Career Education (School Based) Model from its inception to date. It identifies some of the historical antecedents of the project, describes the early organizational activities, depicts some of the predominant conceptual problems, and reports on general areas of effort presently underway. The report is written in a popular journalistic style for the general public. Future reports will provide a chronological reporting of project activities on a quarterly basis.

Project-generated materials will be released to the ERIC Clearinghouse for Vocational and Technical Education. Those interested in these developmental materials may obtain them through this source.

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July 14, 1972

HOW IT ALL BEGAN...

The Emergence of Career Development Theories

The concept of Career Education is neither new nor revolutionary; it has evolved from decades of experience and experimentation with career development theories.

The current movement in American public schools can be traced to the early 1950s, when guidance and vocational experts, such as Donald Super, Henry Borow, Edwin Herr and Martin Katz, theorized about the need to make a student's learning experience more relevant to the real "world of work."

The "Sputnik" scare of the late '50s prompted American schools to de-emphasize vocational training and urged students to concentrate on mathematics, the sciences, and college preparatory courses. Then, in 1963, Congress passed a broad Vocational Education Act. It stimulated interest in career development theory and focused new attention on preparing the individual student for job performance and mobility. It had far-reaching effects: some of the early components of Career Education were first identified in the exemplary vocational education projects funded under this and subsequent legislation.

The 1960s was a decade of sharp criticism of American education. As technology became increasingly complex in a modern society, there was growing popular concern that the traditional public school lacked relevance for many young people. Books attacking education occasionally reached best-seller status, (i.e., "Why Johnny Can't Read"); and calls for wholesale reform or sweeping change in education became commonplace. However, as

Derek C. Bok, president, Harvard University, observed in January, 1972, "It is much easier to castigate the 'lock step' of our curricula than it is to conceive of truly viable, useful alternatives."

One such alternative, however, has received serious attention and is now being strongly supported through the U. S. Office of Education. This concept was identified in July, 1970, when the National Advisory Council on Vocational Education issued a report which called for a complete reform of the American educational system to include Career Education.

Project Rationale

A major redirection of the American public school system oriented toward Career Education is no small undertaking. Of the many factors which spurred this developmental movement, perhaps the primary motive is that "large numbers of students graduating or leaving schools are unable or ill-equipped to enter the labor force." (Taylor, "Perspectives," 1972).

Questions frequently raised today about the American public school system include the following: (Miller, "Philosophy," 1971)

1. Why do 30% of our public school students drop out before completing high school?

2. Why are most school courses designed for 20% of the students who complete a college education, when 80% of the careers that people actually pursue do not require a college degree?

3. Why aren't 15,000 school hours (Kindergarten-12th grade) enough to prepare the average student to enter the world of work, if he chooses to do so upon exiting high school?

4. Why is the relevance of school repeatedly being questioned by students?

5. Why do people enter careers by chance rather than by design?

The purpose of a comprehensive career education system is to help alleviate the problems underlying these questions. As Sidney P. Marland, U. S. Commissioner of Education, points out, "None of us really learns in a vacuum. We learn for a purpose...I would expect Career Education to heighten the intellectual quality of education, because school work would become more meaningful and stimulating, resulting in higher motivation."

The Concept of Career Education

The first actual thrust to implement Career Education in American public schools emanated from the U. S. Office of Education (USOE). Commissioner Marland expressed the view that "all educational experiences--curriculum, instruction, counseling, etc.,--should be geared to preparation for economic independence, personal fulfillment, and an appreciation for the dignity of work."

While Career Education has not, as yet, been precisely defined, one emerging concept is that it is a developmental process which begins in kindergarten and continues through the adult years. The student progresses from an initial awareness of careers to exploration and preparation, in a continuous advancement toward a satisfying adult life-role.

A concept with such broad objectives is bound to incur substantial skepticism and disbelief. Dr. Keith Goldhammer, Dean of the School of Education, Michigan State University, cautions that "It would be deluding to think of the 'careers curriculum' as a panacea for all our educational

ills." Conversely, he adds that it would be equally deluding "simply to reject the concept without carefully assessing its potential."

USOE Backs Career Education

Early in 1971, the USOE decided that there was sufficient merit in the concept of Career Education to justify a research and engineering effort. Four experimental models were to be independently developed--creating a career-oriented program that would be (1) school-based; (2) employer-based; (3) home or family-based; and (4) residential or community-based.

CVTE Gets CCEM Contract

In May, 1971, The Ohio State University's Center for Vocational and Technical Education (CVTE) at Columbus, Ohio, submitted a proposal to USOE seeking the role of project manager for the school-based model. The purpose of the project was to develop, test and install a Comprehensive Career Education Model (CCEM) by restructuring the existing American educational program around career development needs. The following month, the CVTE was awarded a $2 million grant for the developmental phase of the school-based model through March 16, 1972. A supplemental grant of $1.7 million was approved by the USOE in October, 1971.

The USOE project guidelines stipulated that the Model was to be directed by the CVTE and installed in several Local Education Agencies (LEAs) throughout the country. (Figure 1 on page 6 illustrates the USOE conceptualization of the school-based model.)

Selection of LEAs

Fifty-three potential LEAs were identified by the USOE. Several

COMPREHENSIVE CAREER EDUCATION MODEL

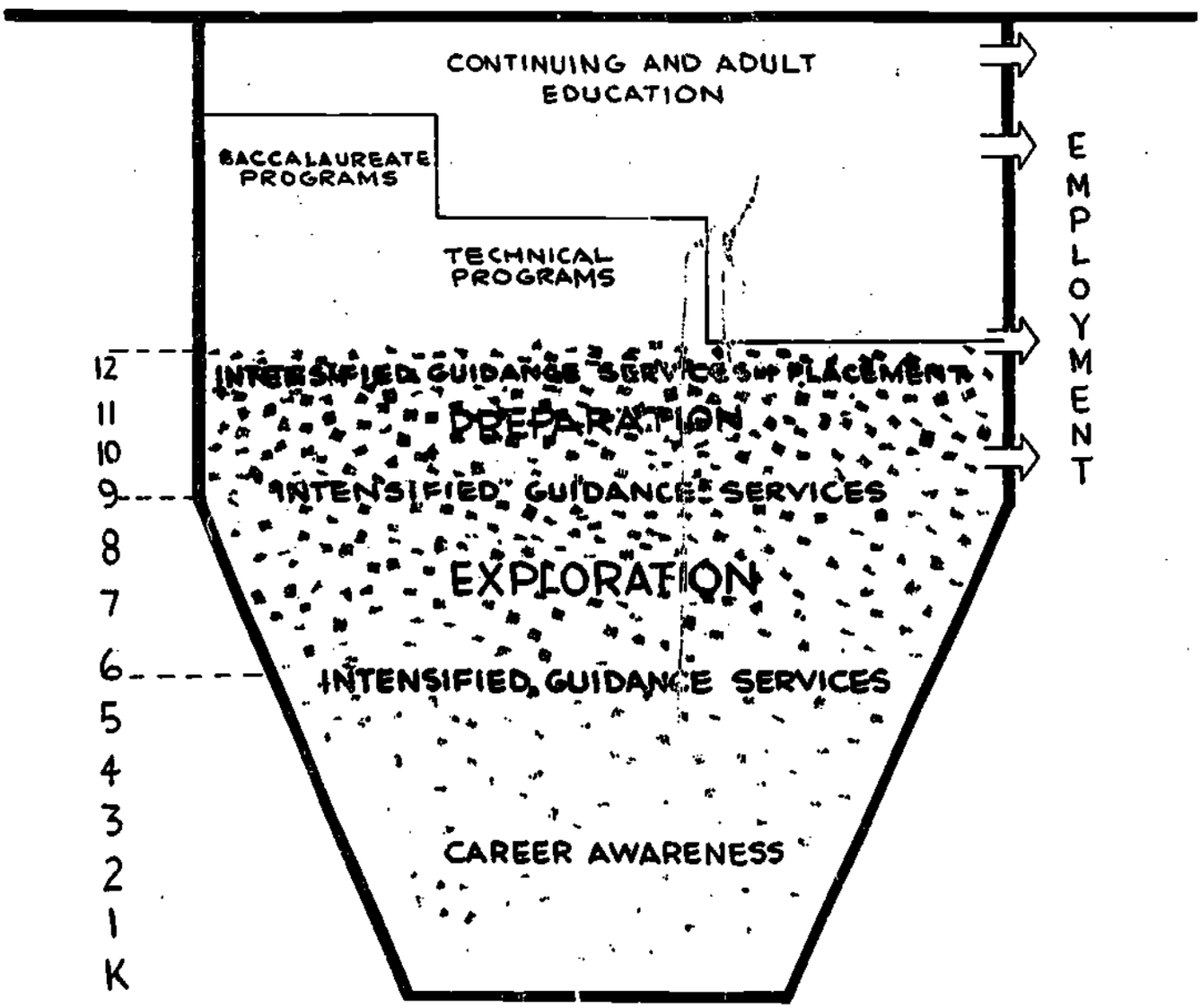


Figure 1

USOE Conceptualization of School-Based Model

screenings reduced the number of candidates to thirteen. These urban or semi-urban school districts represented the strongest and most comprehensive K-12 Career Education programs in our nation.

The 13 districts were invited to compete for roles as project subcontractors, and 12 of the 13 candidates submitted proposals to USOE by June 30, 1971. The 12 sites were visited by a team of USOE appointed evaluators, to assess the ability of the districts to participate effectively in the project.

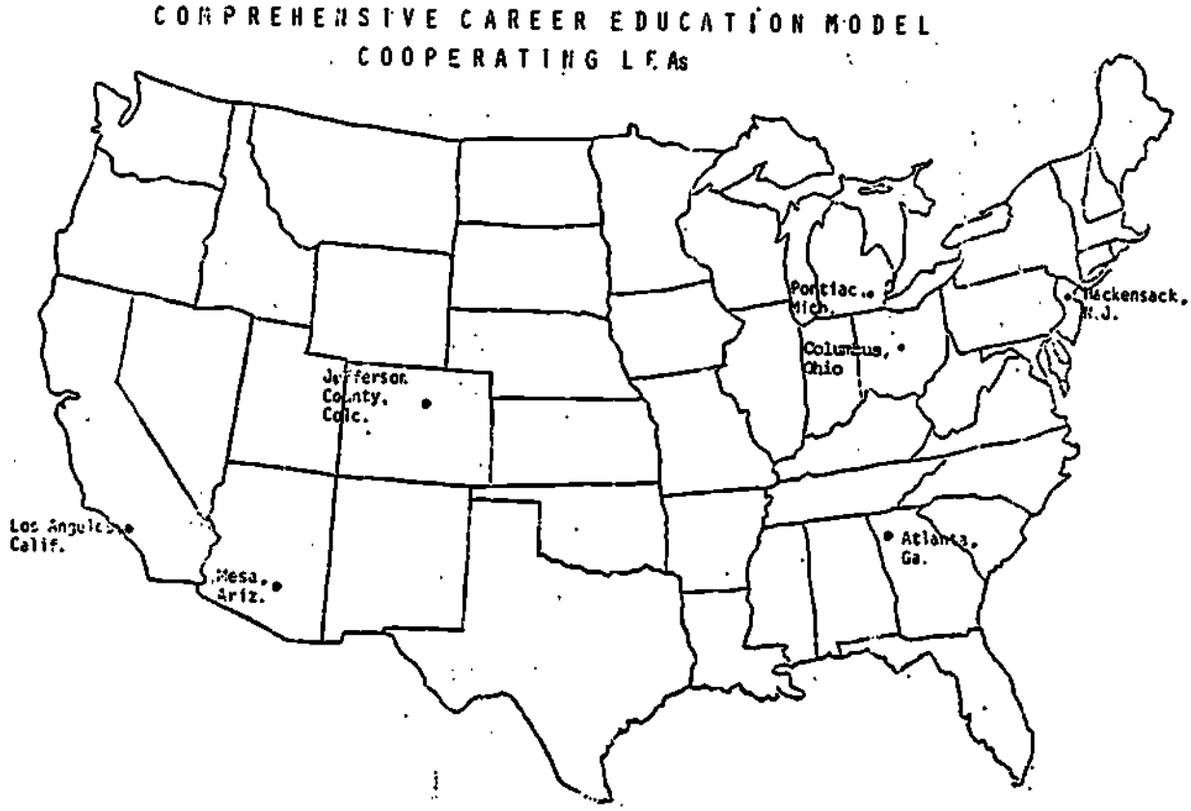
On August 9, 1971, the USOE selected the following six LEAs: Atlanta, Ga.; Hackensack, N.J.; Jefferson County, Colo; Los Angeles, Calif.; Mesa, Ariz.; and Pontiac, Mich. Each LEA was provided with a CVTE resident project team to offer technical assistance, on-site consultation and a direct liaison with CVTE. (Figure 2 on page 8 pinpoints the six LEAs.)

CVTE, as the prime grantee, supervises individual LEA subcontracts and is accountable to the USOE for the entire program and for all funds expended.

Scope of LEA Participation

The CCEM will be installed and tested in the entire school districts of Mesa, Ariz.; Pontiac, Mich.; and Hackensack, N.J. It will be implemented in a portion of the school districts of Jefferson County, Colo.; Los Angeles, Calif.; and Atlanta, Ga. More than 80,000 students and 3,500 teachers in 114 schools at these six sites will experience the first developmental effort of the CCEM. Initial components of Career Education are scheduled to be field-tested at all sites during

the 1972-73 school year. (Breakdowns of LEA data are given in Table 1 on page 9 .)



LEA Data
Number of Schools, Pupils & Teachers
served by CCEM

A. Schools

LEA	Elementary Schools	Junior High Schools	Senior High Schools	TOTAL
Atlanta	19	1	3	23
Hackensack	5	1	1	7
Jefferson County	8	2	1	11
Los Angeles	6	3	1	10
Mesa	20	5	2	27
Pontiac	27	6	3	36
TOTAL	85	18	10	114

B. Pupils

LEA	Elementary	Junior High	Senior High	TOTAL
Atlanta	10,036	775	4,887	15,698
Hackensack	2,531	991	2,638	6,160
Jefferson County	3,034	1,169	1,434	5,637
Los Angeles	4,167	4,540	2,634	11,341
Mesa	12,973	6,202	5,051	24,226
Pontiac	12,880	4,694	3,904	21,478
TOTAL	45,621	18,371	20,548	84,540

C. Teachers

LEA	Elementary School	Junior High	Senior High	TOTAL
Atlanta	391	45	259	695
Hackensack	148	82	158	388
Jefferson County	112	47	56	215
Los Angeles	152	221	133	506
Mesa	430	235	199	864
Pontiac	593	210	188	991
TOTAL	1,826	840	993	3,659

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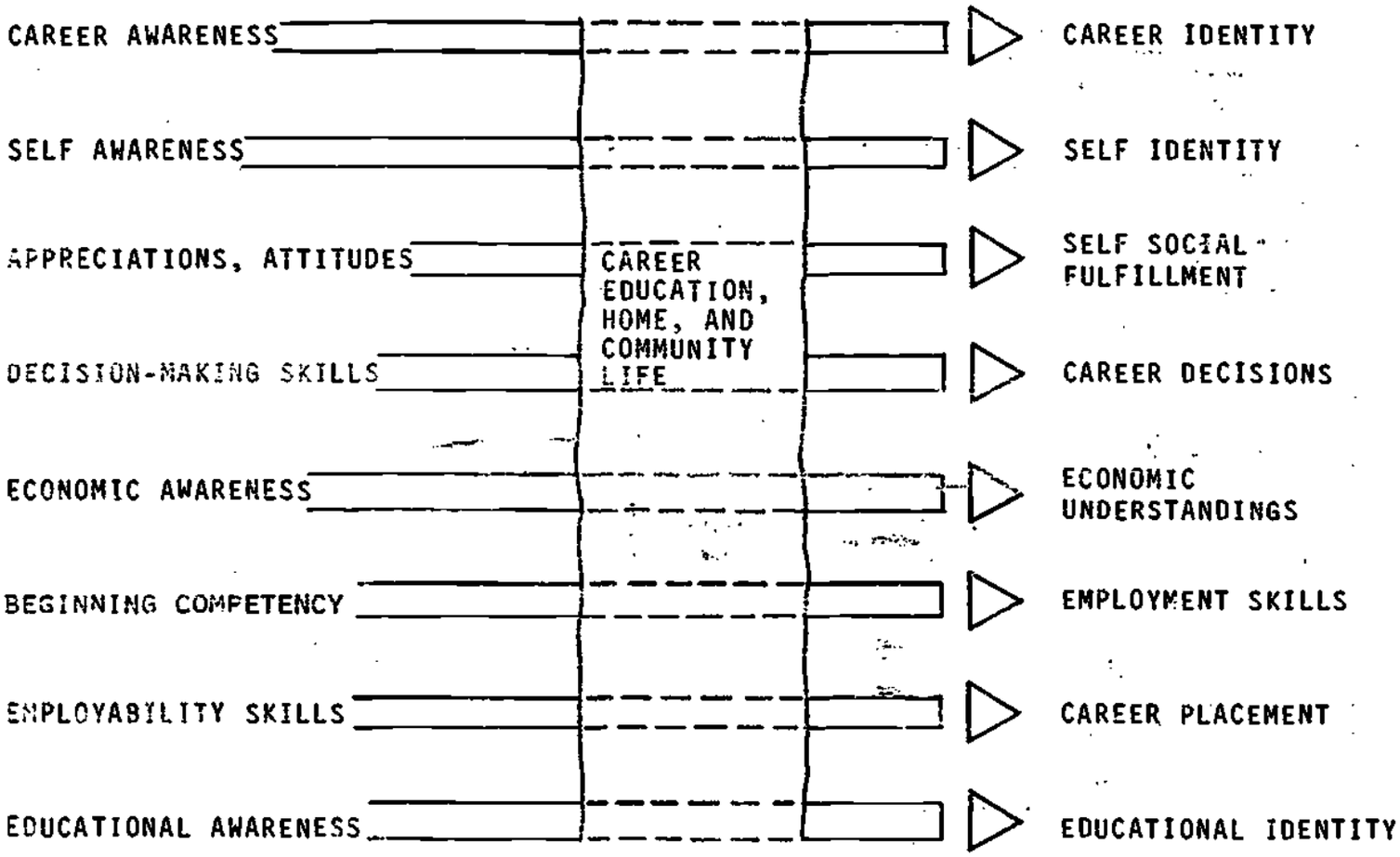
"outcomes" were designed to equip the exiting student with an entry-level job skill and to prepare him for further academic or vocational education. The outcomes are: 1) Career Identity; 2) Self Identity; 3) Self Social Fulfillment; 4) Career Decisions; 5) Economic Understandings; 6) Employment Skills; 7) Career Placement; and 8) Educational Identity. (See Figure 3 on page 13 for the CCEM elements and outcomes.) Later, this initial conceptualization was expanded to reflect the program's emphasis on life-style goals and on serving the broad career development needs of learners.

ELEMENTS OF CAREER EDUCATION



THE CCEM PROGRAM GOAL MATRIX. . .

When placed graphically against the 13 grade levels, kindergarten through twelfth grade, the eight elements and their corresponding outcomes constitute one clear frame of reference, or matrix, for directing and organizizing the content of a comprehensive career education program. (A simplified CCEM Program Goal Matrix is illustrated in Figure 5 on page 16.)

LEA Workshops

After the initial validation of the CCEM conceptual Matrix in August, further development continued at CVTE. During October, the six LEAs conducted separate Matrix workshops, involving many classroom teachers and other school personnel in helping to "build" the Matrix. Workshop participants were asked (1) to take each element, grade-by-grade, and write appropriate general program goals; and (2) to translate each goal into measurable performance objectives that indicate what the student will be able to do.

Delphi Process

The results from each of the workshops were subjected to analysis and modification through a variation on the Delphi process of reviewing data. This procedure included several rounds of information exchange, analysis and revision between the LEAs and CVTE. A final synthesis of the Matrix material was completed in December, 1971. This resulted in the first operational version of the CCEM Program Goal Matrix.

Identify Matrix Themes

Besides being extensively involved in the review, editing and rewriting

of Matrix goal statements and performance objectives, the LEAs also helped to identify "common strands" of thought or "themes" within the Matrix goals that extended across all (K-12) grade levels. Similar goals were grouped and restated as "themes" within the elements. A total of 32 themes were adopted by CCEM on December 15, 1971.

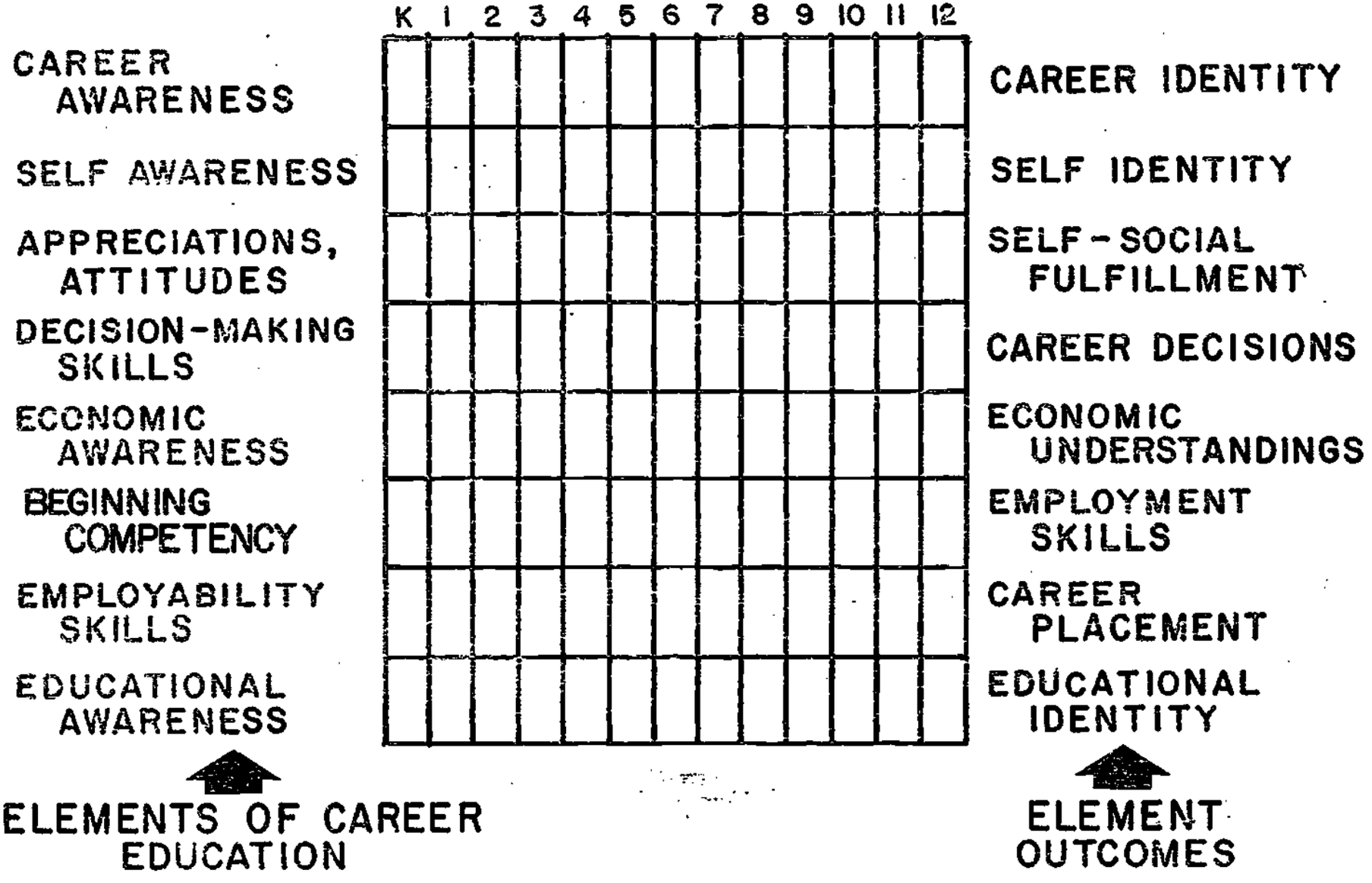
Because each element represents such a broad area of learning, more specific themes proved helpful in organizing new learning experiences for Career Education.

When positioned across the 13 grade levels, the 32 themes resulted in a matrix of 416 blocks or cells (32x13). Each cell indicates at which grade level students need specific learning experiences. With the assistance of more than a hundred classroom teachers, school administrators and curriculum specialists from the six LEAs, the CVTE staff identified appropriate learning goals for each theme at each grade level. A total of 1,477 goals were develcped in a sequential relationship, representing the learning achievements necessary for comprehensive Career Education.

Further development of the Matrix was directed by a task force, which became involved in a Delphi analysis of each element, theme, goal, and performance objective. Each theme was analyzed to detect gaps and weaknesses. Each goal was analyzed for consistency with its theme and with the student's development at that grade level. Each performance objective was analyzed to determine if it contained all the components necessary for evaluation of the student's performance. This review and rewriting procedure was completed on January 28, 1972, and the "operational Matrix" was then forwarded to the six LEAs.

C C E Matrix

DEVELOPMENTAL PROGRAM GOALS



ELEMENTS OF CAREER EDUCATION

ELEMENT OUTCOMES

The CCEM Matrix, with its elements, themes and goals, did not originate out of an isolated "think tank" or as the product of a few select "experts." Classroom teachers, curriculum/guidance specialists and school personnel were involved in a dynamic process of continual feedback and revision that extended over a period of nearly six months.

While the CCEM Matrix of program goals is far from "ideal" or complete, it is a highly useful tool. It provides a frame of reference for defining the direction for the program content of a comprehensive career-oriented curriculum, and it also charts the grade-by-grade sequencing of goals that the student is expected to achieve. Further refinement of the Matrix is anticipated as it is used in each LEA to identify curriculum units, and to develop CCEM curriculum materials.

CURRICULUM UNIT SELECTION...

The CCEM was originally conceived as a "capstone" project. Existing curriculum materials were to be identified, refined and packaged into a transportable program.

Even a cursory examination of existing curriculum materials, however, found them to be far from comprehensive. Since neither the quantity nor the quality of curriculum units was sufficient for creating a viable CCEM, the scope of the project expanded to a major assembly and refinement program.

Since the curriculum units ultimately chosen were to be installed and tested in all six LEAs during the 1972-73 school year, the unit selection process was considered critical to the success of the CCEM.

The strategy used in developing curriculum units was one of infusion: to weave Career Education into all contemporary school subjects--not to develop self-contained courses in Career Education. The objective was to identify the potential of units to deliver the appropriate grade level goals within the math program, the reading program, the science program, the social studies program, etc.

The unit selection process involved two major efforts: a review and analysis of existing curriculum units at the six LEAs; and a national search for all "on-shelf" units relating to Career Education.

LEA Unit Inventories

The curriculum selection process began in November, 1971, when the six LEAs inventoried all of their in-place (existing) units that delivered on the Matrix goals at each grade level. Approximately 1,000 units were identified in this initial process. By December 17, a total of 269 of these units had

survived the first rigorous screening process at CVTE and were considered for inclusion in CCEM.

National Search

The CVTE solicited bids from six firms to locate, retrieve, screen and classify existing noncommercial curriculum materials relevant to Career Education. On November 1, 1971, the Palo Alto Educational Systems, Inc. (PAES) of Scottsdale, Ariz., was awarded the national search subcontract. Three major sources were tapped by PAES--exemplary education projects funded by the USOE; state departments of education, and local school districts. A total of 736 curriculum units were identified by PAES. The search also provided CCEM with a list of types of materials canvassed, a system for classifying curriculum units, an assessment instrument for evaluating rearch materials, computer printout booklets of all rearch materials, and a final report on the search effort. All search materials were submitted to CVTE for further evaluation.

Development of the CUSI

A device for evaluating curriculum units was developed jointly by CVTE and LEA personnel in November. This was called the CCEM Curriculum Unit Selection Instrument (CUSI). It was designed to identify: (1) units ready to be field tested; (2) units in need of refinement; (3) units which should be eliminated; and (4) types of refinement necessary.

The CUSI was administered to the 269 LEA "in place" units in January, 1972. After a careful analysis of the results, 90 units were dropped, reducing the number of portentially usable LEA units to 179.

Unit Analysis Process

During January and February, LEA representatives were intensively involved at CVTE in planning and implementing the unit selection procedures. Alternative methods for selecting units were explored, revised, refined and tested. A "Curriculum Analysis Work Sheet" was developed for the purpose of rating units, estimating teaching time required, and recommending "go" or "no go" decisions on individual units. A total of 915 units were subjected to this thorough analysis (179 LEA in-place units and 736 national search units).

Teams were assigned to each grade level to insure adequate coverage of Matrix goals and performance objectives for all grades. By mid-February, 105 units had been selected for modification and installation in the LEAs during the 1972-73 school year. Contracts were then negotiated with the LEAs to refine and pilot test specific units during the spring and summer months.

Unit Evaluation

The importance of obtaining teacher feedback following pilot testing of selected curriculum units prompted the CVTE evaluation component to develop a Curriculum Unit Process Evaluation Instrument (CUPEI), which was later subtitled "Unicheck." This instrument has been distributed to the LEAs for use during unit pilot testing. It provides a mechanism for allowing teachers to evaluate each unit during and following classroom experience. It is expected that the "Unicheck" will undergo further revision after its initial classroom exposure.

RESEARCH ON CLUSTERING ...

During the early conceptualization of CCEM, considerable attention was devoted to examining clustering concepts as a vehicle for organizing information about the world of work. The initial USOE clustering concept for Career Education provided an organizational structure for Occupational Information, including Job Opportunity-Labor Market, and Career Preparation information.

The purposes of this clustering system were to supply the student with information about the world of work, to help him choose a career suitable for his interests and abilities, and to provide models that shape instructional objectives and learning experiences.

Since it was felt that a clustering system could be useful in identifying and validating appropriate career clusters for CCEM, the CVTE solicited bids from four educational research firms to undertake this effort. On November 1, 1971, the Human Resources Research Organization (HumRRO) of Alexandria, Va. was awarded a subcontract to construct a clustering system for CCEM.

HumRRO reviewed available materials and found that existing clustering systems were of three basic types: 1) descriptive; 2) sociological-psychological; and 3) task-analytic. After determining that none of these systems adequately met CCEM needs, HumRRO devised a new clustering system for CCEM by synthesizing useful features of existing systems. The HumRRO analysis of clusters proposed that CCEM utilize a model with one facet representing institutions, a second using occupational groups, and a third depicting the status or level at which the occupation exists.

The HumRRO clustering report, entitled, "The Validation of a Set of

Occupational Clusters for use in the CCEM," contributed significantly to the development of the CCEM Career Information System Model (see pp. 35). Essentially, it enabled CCEM to appraise alternative clustering approaches and to assess CCEM information requirements.

EVALUATING THE CCEM...

The need for an objective, summative evaluation of the progress and performance of CCEM was recognized both by the USOE and the CVTE early in the project. Consequently, bids for the external evaluation effort were received from six firms, and on November 1, 1971, a subcontract was awarded to the Institute for Educational Development (IED) of New York City.

Evaluation Tasks

IED was to perform four tasks: (1) monitor the performance of the CVTE/CCEM project staff; (2) evaluate the performance of the instructional staff in the six cooperating LEAs; (3) characterize the six LEAs so that other LEAs can determine whether they are similar enough to consider adoption of all or a portion of CCEM for their local use; and (4) determine the amount of pupil growth in achieving the CCEM objectives.

IED submits quarterly evaluation reports to CCEM and USOE. The next interim report is due July 31, 1972.

Attitude Inventories

As a part of its subcontract, IED agreed to inventory and measure the attitudes of pupils, parents, and teachers toward Career Education in the six LEAs. An "Attitude Inventory Instrument" was constructed and pilot tested at three LEAs in December, 1971. The instrument was then revised and administered at all six LEAs in January, 1972. At Los Angeles, the instrument was translated into Chinese and Spanish and administered in these languages as well as in English.

IED issued a report of its findings in February, 1972, which indicated

PROJECT DIVISIONS

PLANNING AND SYSTEMS...

The Planning and Systems Division is responsible for developing and monitoring the long-range planning procedures of CCEM, designing and monitoring the CCEM fiscal management system; maintaining quality controls; documenting and reporting CCEM activities; allocating facilities and equipment; and monitoring of subcontracts.

Since March, 1972, a management system has been outlined, and the project has been functionally organized to define the work breakdown structure. Cost centers have been assigned to collect budgetary information, and scheduling procedures have been defined. Peat, Marwick, Mitchell and Co., a nationally recognized public accounting firm, was engaged to help with the design phase of the management system and to help with networking project activities into short-range (six months) planning charts.

The division has developed a system for monitoring curriculum unit development, and is in the process of designing a curriculum unit production monitoring system. Systems for monitoring other tasks are planned.

Documentation

All project correspondence, telephone memoranda, working papers, reports, field visit summaries, and other documents are collected, coded, and filed. An inventory of the documentation file is forwarded monthly to USOE. Functions of this section also include editing and facilitating publication of developmental project materials; preparing USOE reports and internal communications such as newsletters; and documenting significant project events. A telecopier, installed in May, has proved to be a valuable communications tool between CVTE and the six LEAs.

CCEM Subcontracts

Two major subcontracts were negotiated during the previous quarter.

1. Matrix Refinement -- The CVTE issued a subcontract in May to Westinghouse Learning Corporation of Palo Alto, Calif., to review, edit and prepare the CCEM operational Matrix for publication. Staff members who had participated in the development of the Matrix were interviewed, and the project documentation was reviewed. The research edition of the Matrix, which specifies the CCEM elements, themes and developmental program goals, will be printed in limited quantities this summer.

2. National Search -- Three bidders responded to the CVTE's request for the bids to conduct a national search for commercial materials related to career education. A bidder's conference was held at CVTE on May 16, and finalists for the national search effort were to participate in contract negotiations at CVTE in June. The subcontract is expected to be awarded in July, following approval by the USOE.

PROGRAM DEVELOPMENT...

Curriculum

The CCEM curriculum (K-12) has been defined as "all those experiences of the child under the auspices of the school which utilize both on and off-campus educational resources to provide the opportunity for, an appreciation for, and an understanding of (1) the dignity of work and (2) a useful and fulfilling life." (McKinney, "CCEM Curriculum," 1972)

Conceptualizing a curriculum design for the CCEM is a major endeavor. It is an evolutionary process in which final closure is not possible, and probably is not even desirable. At present, the following curriculum objectives for students in a comprehensive career education program have been identified:

It is assumed that CCEM must:

1. Assist youth to choose an individualized personal life style and to establish and discover alternative paths for reaching goals commensurate with that life style;

2. Prepare students to enter the "world of work" as contributing members of a productive society;

3. Assist young people to view education as a lifelong pursuit that is not restricted to schools, classrooms, or traditional institutions of learning; and

4. Assist youth to develop problem-solving skills required to cope with an increasingly cybernated society.

Curriculum Activities

The CCEM curriculum activities have been divided into two subcomponents; the K-6 group, which is responsible for the development and implementation of a career awareness curriculum for kindergarten through sixth grade students; and the 7-12 group, which is responsible for the career exploration and career entry preparation of students in grade 7-12. Additionally, a special Career Preparation Task Force is conceptualizing ways to deliver the 10-12 curriculum program.

All CCEM curriculum groups (K-6, 7-12 and Career Preparation) were intensively involved in the two major CCEM activities completed prior to March, 1972--development of the operational Matrix, and selection of CCEM treatment units for fall installation.

The curriculum section also helped to organize a Curriculum/Career Preparation workshop held at Lakewood, Colo., from January 10-13, which dealt with such topics as selection and preparation of units for fall, occu-

pational analysis of the LEAs by the career preparation staff, and in-service (staff development) plans.

Major activities for the previous quarter (March-May, 1972) were: (1) refinement/development of curriculum units in the LEAs; (2) identifying gaps in the unit coverage of CCEM Matrix goals; (3) reviewing LEA unit outlines; (4) identifying priority units; (5) guiding the development of the 4-5-6 and 7-8-9 cluster units; (6) monitoring curriculum unit development in the LEAs; (7) establishing pilot test procedures; (8) initial conceptualization of the 10-12 curriculum program; and (9) coordinating a Curriculum/Guidance/Support Systems workshop in Los Angeles from March 6-9.

Unit Refinement/Development

The CCEM curriculum unit refinement/development process is an engineering-assembly approach. Existing curriculum units are selected from LEA and national search sources for refinement, pilot testing, and installation (field testing). The 32 Matrix themes and their goals provide direction for the selection of treatment units.

Following the contracting of curriculum units by the LEAs in February, 1972, the CCEM Curriculum group focused on establishing priorities and policies for unit monitoring. Informal curriculum conferences were held at the LEAs early in April to review unit refinement/development guidelines, procedures and criteria. The LEAs submitted their initial unit development outlines to CVTE in April, and unit priorities were then established. (The Curriculum Unit Development System is depicted in a flowchart in Figure 5 on page 33). Unit development activities began at each of the six sites.

On May 11, the first CCEM curriculum unit was received. Developed by the Pontiac, Mich., LEA, the third grade "Supermarket" unit was reviewed by

CURRICULUM UNIT DEVELOPMENT SYSTEM

Flow of Work from Initiation through Pilot Testing

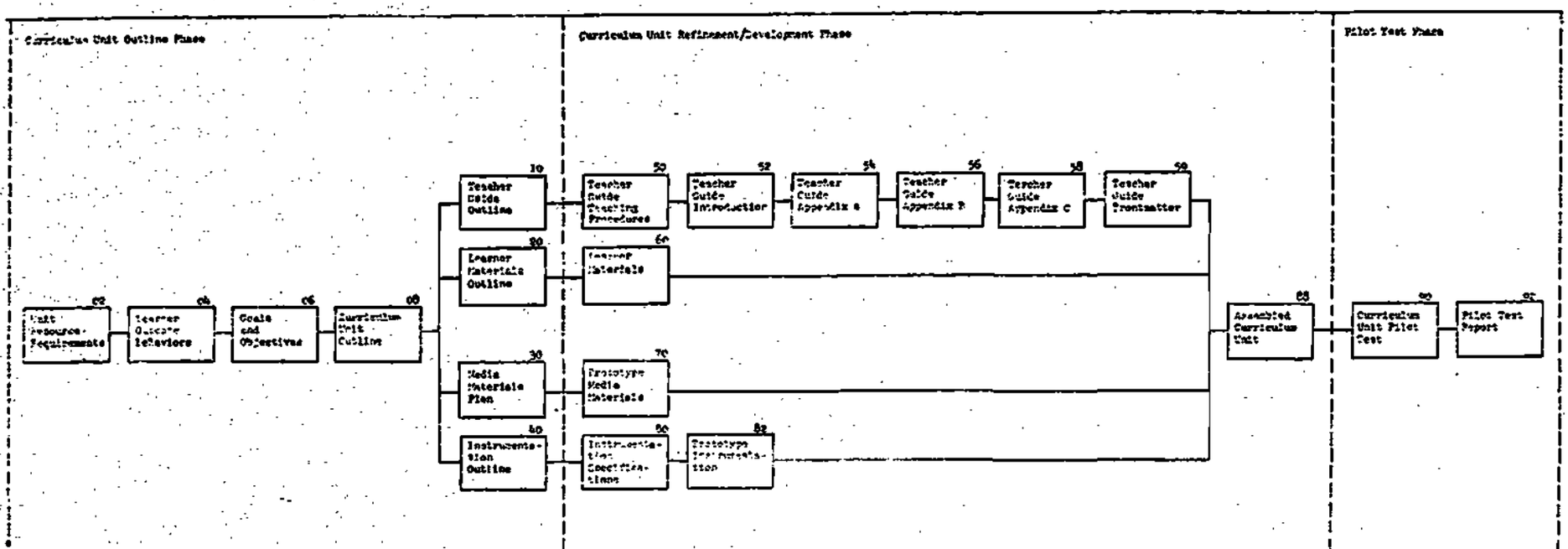


Figure 5

CVTE and approved for pilot testing in May. This unit introduces the primary child to an ordinary retail business that he can relate to.

CVTE evaluation personnel monitored this first pilot test procedure and drafted guidelines for testing of future units. Other units will be pilot tested during the coming weeks. A second grade unit, "People Who Work With Animals"; and a kindergarten social studies unit,"Work," will be tested in Pontiac. The Atlanta, Ga., LEA will pilot test a ninth grade "Photography" unit and a third grade "Forestry" unit.

The number of CCEM units currently being developed by each LEA is as follows: Atlanta, 16; Hackensack, 10; Jefferson County, 22; Los Angeles, 27; Mesa, 16; and Pontiac, 14. Of these 105 units, between 20 and 40 priority units will be ready for fall, 1972, installation. The remainder of the units are expected to be installed in 1973.

Career Preparation

The CCEM Career Preparation Task Force was established in April and is responsible for the conceptualization, development and implementation of the 10-12 CCEM curriculum program. Functioning as a part of the Curriculum group, the task force met with four consultants in the field of vocational education at CVTE on April 26-27. A working paper on the career preparation conceptualization was presented at the workshop. Revisions to the paper were to be reviewed by LEA representatives and CVTE personnel at a conceptualization conference at CVTE in June.

Community Relations

The Community Relations component was created to accomplish three major tasks: (1) incorporate community resources in the development and

implementation of Career Education; (2) inform the LEA communities of the progress and implications of CCEM; and (3) support the LEAs in the development and implementation of a community involvement program.

Prior to May, 1972, this component also was primarily responsible for CCEM professional personnel recruitment and for information activities. These activities were transferred to a separate unit as of June 1.

Major activities during the previous quarter (March-May) included: (1) review and approval of final script for "I Want to Be" career education film developed by the Hackensack LEA; (2) schedule monthly visitors' briefings; (3) review and approval of a general brochure on CCEM for public distribution; and (4) review of LEA plans and preparation of community relations guidelines. The CCEM Community Relations group prepared working papers dealing with parental involvement, industrial relations, community organizations and mass media.

Support Systems

The Support Systems unit is responsible for gathering, analyzing, storing, and disseminating information required for the delivery of Career Education and for the effective management of the Career Education process. This component is setting up systematic methods for organizing and classifying student data, instructional career information, educational resources information and placement information.

Career Information System Model

The development of a preliminary Career Information Model (CIM) was completed by the Support Systems unit in March, 1972. The model represents a composite of several clustering and occupational information systems.

The model provides an information base consisting of the 21,741 job definitions contained in the U.S. Department of Labor's Dictionary of

WHERE DO WE GO FROM HERE . . .

During the next quarter (June 1-August 31, 1972), CCEM project activities will be concentrated in several areas. The most intensive effort will be the refinement/development of curriculum units for field testing at the LEAs in the 1972-73 school year. Units will be developed and pilot tested continuously this summer through a cooperative effort by the CVTE/CCEM and LEA staffs and independent curriculum specialists. A system will be implemented to reproduce CCEM curriculum units for distribution to the LEAs for field testing.

Parallelling the refinement/development effort will be extensive Staff Development activities to train LEA personnel prior to fall installation (field testing) of units. The field testing process will be subjected to thorough and continuing analysis by both internal and external evaluators.

The conceptualization of several CCEM components will be continued during the next quarter. Working papers will be generated for the specific grade areas of 4-6, 7-9, and 10-12, and groundwork will be laid in the new Post-Secondary and Rural subcomponents. Work will continue on the development of project Support Systems, and the CCEM Guidance, Placement and Community Relations programs.

As CVTE and the LEAs gear up for the 1972-73 field testing endeavor, increased efforts will be devoted to communications between CVTE and the LEA school administration and project staff.

During the coming quarter, a subcontract will be awarded for the national search for commercial Career Education materials. The first substantive project publication, the CCEM Matrix of Developmental Program Goals, will be edited and printed in August. The next quarterly report, for the June 1-August 31 period, will be available in October, 1972.

SUMMARY...

"Career Education: An Idea Whose Time Has Come" -- This headline appeared in the June 20, 1972 issue of the New York Times, over a letter by Sidney P. Marland, Jr., USOE Commissioner of Education, which stated, in part:

> Something is wrong when public education allows 2.5 million young people in a single year to exit our schools and colleges without marketable skills. Even college graduates find themselves increasingly in this situation.
>
> These unfortunate young people represent an investment of $28 billion--about one-third the total annual cost of the educational enterprise. Even more distressing is the personal loss these young people undoubtedly experience as they find few if any rewarding outlets for their aspirations and energy.
>
> Career Education is simply a concept whose time has come. Traditional avenues to semiskilled occupations through on-the-job training are all but closed. Projects currently supported by my office are designed to help youngsters identify possible career choices in the course of their academic studies and to prepare for one or more of these choices so that wherever they leave the system--as high school dropouts or graduates, as college dropouts or graduates--they carry with them job skills commensurate with their interests and abilities.

The school-based Comprehensive Career Education Model is charged with developing a model that could restructure the present public education program around career development goals. These goals have been initially identified in an intensive research and engineering effort which began in July, 1971. This effort is an ongoing, dynamic process of continuous refinement.

The CCEM encompasses all grade levels, K-12, and extends into the adult years. It embraces business and industrial resources, and requires extensive community and family involvement.

The CCEM is being cooperatively developed by the CVTE and six local education agencies across the nation. It will be tested at these sites in a variety of demographic settings beginning in the fall, 1972. Ultimately, a validated, nationally transportable Career Education program will be available to all American public schools.

The objectives of CCEM are rooted in the real life needs of students. The program is an innovative and challenging one that will require extensive redirection on the part of school districts that choose to adopt either all, or a portion, of the Career Education model. Above all, it is a concept that focuses on the immediate task of making school more relevant for the student.

The program will be successful if it prepares each exiting high school student both for the next educational step in his "career ladder' and for a marketable, job-entry skill. But more importantly, it aims to open the student's eyes to the broad range of career options available to him as he selects a self-fulfilling life role.

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